

## **East Devon DC, Environmental Health**

### **Standard Manure and Fly Management Plan, Free Range Egg Producers- October 2012.**

#### **1. Manure Management.**

It is known that wet conditions in manure inside the poultry houses of free range egg producers are likely to support housefly breeding grounds and cause subsequent fly nuisance problems. It has also been shown that dry sheds are less likely to suffer high levels of ammonia and odour, and that egg hygiene and bird health and welfare is improved. In order to take the Best Practicable Means to manage the manure, the following standards of good practice will be maintained and adopted in all such poultry buildings.

##### **1.1 House construction**

- The site of the buildings shall be protected from groundwater run-off, for example by the installation of French drains or other surface water drainage arrangements.
- The floors of all permanent sheds will be fully concreted and drained to a suitable contained or piped system. This concrete floor will be 150mm (6") above external ground level to prevent any rainwater or run-off entering the shed.
- The floors of mobile sheds will ideally be raised above the surrounding ground level, or will be otherwise protected from rainwater or groundwater ingress.
- All sheds will be water-tight, protected from groundwater ingress and provided with guttering and downpipes discharging into a french drain or piped surface water system.
- Future maintenance of the fabric of the buildings and its services will be carried out as and when required to ensure that the integrity of the buildings and drainage arrangements are maintained.

##### **1.2 Mains water supply**

- The water drinkers will be secured wherever possible so that they cannot be moved by the birds. Nipple drinkers will be fitted with, as a minimum, drip cups to collect spilled water. Bell drinkers will be fixed to minimise spillages.
- The water supply to each house shall be metered so that unusual usage patterns can be easily recognised.

##### **1.3 Monitoring the water installation**

- In order to avoid uncontrolled leaks or flooding, the water installation will be inspected daily to ensure that the drinkers are working properly and that no leaks are occurring. If any problems are detected they will be rectified promptly. Records will be kept of inspections carried out and remedial action taken.

## **1.4 Ventilation**

- Ventilation fans or other ventilation arrangements (which may include natural ventilation) will be installed within the shed in such a way that they ventilate the pits, and will be maintained and operated in full working order.

## **1.5 Manure clearance**

- At the end of each flock cycle, manure will be removed from the shed and the pits thoroughly cleaned. The pits shall be free of standing or pooled water before the introduction of a new flock.
- Should a leak occur during the flock cycle, the wet manure shall be removed (if the design of the sheds allows) within 7 days of the incident occurring.
- Wherever possible a manure removal system shall be installed which enables manure to be regularly removed throughout the flock cycle, thereby preventing an accumulation of manure which may become a breeding ground for flies.

## **1.6 Feed Selection**

- The birds will be provided with quality feed of the high fibre type which produces firmer, drier litter and the feed will be managed in such a way that spillages into the manure pit do not occur.

## **1.7 Egg Belt**

- The egg belt and boxes will be installed and maintained in good order to minimise the potential for eggs to fall into the pits.

## **2. Fly Control.**

### **2.1 Monitoring**

- The following arrangements for monitoring adult flies and larvae will be put in place and maintained throughout the lifetime of the building.
  - 2.1.1 30cm x 30cm squares of sticky fly paper will be placed at 6 locations throughout the pit, hanging from the floor slats or on pillars or resting surfaces. The numbers of flies stuck to the paper each week will be counted and recorded, and the flies identified. This will be carried out every week from 1<sup>st</sup> March to 1<sup>st</sup> December each year. The results will be recorded on a table or in graph form to enable trends to be recognised. Where the total number of flies recorded exceeds 20 in one week, additional control measures will be commenced and continued until the numbers drop below 20.
  - 2.1.2 The manure shall be inspected daily for signs of larvae. In addition a 15cm x 15cm sample (1 trowel full) of the top 5cm of manure from 6 locations distributed

throughout the manure pit will be removed for examination, the first sample being taken 21 days after re-stocking and subsequent samples every 7 days thereafter, but only between 1<sup>st</sup> March and 1<sup>st</sup> December. The number of live house fly larvae shall be counted and identified and the results tabulated or recorded on a graph. The presence of live larvae indicates need for additional control measures.

- 2.1.3 In the egg packing room hang red stripe sticky fly paper and pull down 30cm each week. Record the numbers of flies each week. If numbers exceed 20, additional treatment is required in the form of adulticides, baits and/or larvicides as appropriate.

## **2.2 Control**

- The following arrangements for controlling adult flies and larvae will be put in place and maintained throughout the lifetime of the building.
- 2.2.1 A proprietary larvicide will be applied to the litter at the first signs of any infestation of larvae and a programme of re-treatment will be continued as recommended by the manufacturer in order to control and reduce the numbers of fly larvae within the manure. The larvicide will be applied in solution evenly across the surface of the manure in the event of a widespread infestation.
- 2.2.2 An adulticide will be applied within the pits and sheds at the first signs of adult fly emergence and a programme of re-treatment will be implemented as recommended by the manufacturer in order to control and reduce the numbers of flies emerging from the poultry shed.
- 2.2.3 Additional knock down treatment measures such as electronic fly killers and residual insecticides will be used within the pit, egg packing room and elsewhere within the curtilage of the site in conjunction with the control measures specified in 2.2.1 and 2.2.2.
- 2.2.4 Where it is reasonably practicable to do so, any chemicals selected to carry out the treatments specified above will be alternated with other similar products with a different active component in order to reduce the potential for pesticide resistance to develop.